State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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July 9, 1993

Mr. Richard Johnston
Plant Manager
Chemstar Incorporated
P.O. Box 537
Grantsville, Ut 84029

Dear Mr. Johnston:

Re: Conditional Tentative Approval, Chemstar Incorporated, Grantsville Quarry, M/045/028, Tooele County, Utah

The Division has completed its review of your December 18, 1992, response to our April 8, 1992, review letter. After reviewing the supplemental information, the Division is prepared to grant a ***conditional*** tentative approval of your permit application. The following *conditions*/comments will need to be addressed before we can finalize the tentative approval process and publish a formal notice of tentative approval. The comments are listed below under the applicable Minerals Rule heading. Please prepare and format your response in a similar fashion.

R647-4-105 Maps, Drawings & Photographs

The maps provided in this latest response are acceptable, however, please provide us with a scale for these maps.(AAG)

R647-4-106 Operation Plan

106.5 Existing soil types, location, amount

Please refer to comments under section R647-4-112 Variances.

106.7 Existing vegetation-species and amount

The operator still needs to provide a basic vegetation survey of the native plant species associated with this site. An evaluation of the predominant plant species and a cover estimate must be provided. In order to do this, you will need to select undisturbed reference area(s) that are representative of the area(s) currently disturbed. These reference areas will be used as the basis for establishing the final reclamation revegetation standard. We suggest that Chemstar hire a qualified consultant to perform the survey. (HWS)

R647-4-107 Operation Practices

107.1.12 Disposal of trash, scrap, debris

You indicated that trash generated during operations is disposed of in a disposal area located east of the lime dump. Has the Division of Environmental Quality approved of your disposal area? (AAG)

R647-4-110 Reclamation Plan

110.5 Revegetation planting program

The Division recommends that Chemstar further amend the waste dump fines by incorporating a mulch prior to seed application. The plan indicates that the fines will be fertilized and seeded, but this will probably be insufficient to obtain an acceptable plant community. The Division suggests using an alfalfa hay mulch at a rate of two tons per acre. The alfalfa hay mulch contains nitrogen, a beneficial nutrient in reclamation. This type of mulch, if locally purchased, will also contain seeds of other species which would readily adapt to the site.

The Division also suggests that this approach is used for other areas of the site where topsoil was not collected, because of rocky conditions. Wastes fines could be placed on accessible areas (benches, roads, pads and slopes < 2h:1v), and mixed with mulch and fertilizer prior to reseeding.

The seed mix indicated in your response for the *test plot* is acceptable with the following additions and rates:

Grasses

Common Name	Scientific Name	lbs/acre
Crested wheatgrass	Agropyron cristatum	2
Thickspike wheatgrass	Agropyron dasystachyum	2
Tall wheatgrass	Agropyron Elongatum	2
Streambank wheatgrass	Agropyron riparian	2
Western wheatgrass	Agropyron smithii	2
Russian wildrye	Elymus junceus	2
Galleta grass	Halaria jamesii	2
Indian ricegrass	Oryzopsis hymenoides	2
Canby bluegrass	Poa canbyi	.5

Forbs

Palmer penstemon	Penstemon palmeri	1
Alfileria	Erodium cicutarium	1
Sweetclover	Melilotus officinalis	2
Desert globemallow	Sphaeralcea ambigua	1

Trees and Shrubs

Fourwing saltbush	Atriplex canescens	3
Shadscale	Atriplex confertifolia	3
Winterfat	Eurotia lanata	2
Forage Kochia	Kochia prostrata	.5

Total = 30 lbs/ac

This seed mix should be used only for test plots, since it would be too expensive to use on a large scale. This mix is to be used for the selection of best adapted species for the site. After evaluation of the test plot, a seed mix can be established for full scale application. It will be important to monitor the test plot on an annual basis for the purpose of selecting a final seed mix.

The operator should consider scarification and ripping of areas to be reclaimed prior to seeding. This is especially important for compacted areas. Mulch (alfalfa hay) and fertilizer should be disced into the waste fines, then the seed should be drilled in (if possible). If drill seeding, the seeding rate could be reduced by approximately 30 percent.(HWS)

R647-4-112 Variance

The Division will grant a variance from rule R647-4-107.5 (Removal of suitable soils). The operator has indicated under section R647-4-106.5, of the response, that salvageable soil materials do not exist on the state lands portion of the expanding quarry. Therefore, the Division will not require collection and stockpiling of soils materials from this area of the mine site. (HWS)

A final pit configuration consisting of benches spaced every 25 vertical feet, a 10 foot catch basin on each bench, an inter-bench slope angle of 50-60 degrees, and an overall pit angle of 35.5 degrees is acceptable to the Division. A variance for allowing the bench faces to remain at their natural slope of 50-60 degrees is granted. (AAG)

R647-4-113 Surety

The Division has prepared a draft reclamation surety estimate for the Grantsville Quarry operations. The estimate includes material quantities estimated by Chemstar. No estimate for demolition of the plant facilities was provided by Chemstar. No plant facilities were assumed to have a post-mine land use. The Division's lump sum estimate for demolition of the plant facilities was based on dimensions taken from the site map (April 1990 version) and dimension estimates based on photographs. In addition, assumptions were made as to the construction materials of some structures and the sizes of underground tanks. A copy of the draft surety estimate and plant structures listing are attached for your review. (AAG)

Please notify us of the form of reclamation surety Chemstar will choose to pursue. We will send you the appropriate surety forms once we are informed of your preference. A Reclamation Contract (FORM MR-RC) will also need to be completed and returned with the reclamation surety. We will send you a copy of this form along with the chosen form of surety, once you have made your decision.

R647-4-116 Public Notice & Appeals

As part of the permit approval process, the Division is required to publish notice of tentative approval. We will prepare and publish a public notice formally announcing our tentative approval decision, once we have received a satisfactory response to the remaining conditions/comments as outlined above. Once published, a 30-day public comment period begins allowing any adversely impacted party to notify the Division formally in writing of their concerns/objections. Providing no adverse comments of substance are received during that time period, the tentative decision will become final. The amount and form of reclamation surety will then be taken to the Board of Oil, Gas and Mining for their approval/concurrence during a regularly-scheduled monthly Board hearing. After receiving the reclamation surety and Board approval, the Division will forward the final permit approval to Chemstar.

Thank you for your continued patience and cooperation. We look forward to completing the approval process of this application in the very near future. Please contact me or any of the minerals staff, if we can assist you in preparing your response to this latest review.

Sincerely,

D. Wayne Hedberg

D. Wayne Hedberg
Permit Supervisor
Minerals Regulatory Program

jb
Attachment
cc: Lowell Braxton, DOGM
M045028.rev

RECLAMATION ESTIMATE
Chemstar, Incorporated — DRAFT
Grantsville Quarry — last revision 06/21/93
M/045/028 — Tooele County
Prepared by Utah State Division of Oil, Gas & Mining

Reclamation Details

-Final overall quarry slope of 35.5 degrees; 25 ft vertical spacing of benches
-Quarry benches to be ripped to 12", covered with 6" fines & seeded
-Waste rock dump slope at 2:1 & covered with 6" fines, & seeded
-Any remaining access roads to be regraded & ripped
-Lime dump slope at 3:1 & covered with 6" fines
-Wastewater pond sediments removed to lime dump, pond regraded, cover with
-Plant facilities & all equipment without post-mine use will be removed
-Building foundations broken up & hauled to an approved landfill
-Water supply lines removed, plant area regraded & seeded
-All Chemstar owned utilities will be removed/reclaimed
-All ripped or regraded areas to be seeded & fertilized
-Estimated total disturbed area reclaimed = 77.0

Activity	Amount		$/unit	$
Ripping quarry & roads(0.5 mph)	50,170	cy	0.29	14,549
Regrading roads	5	acre	329	1,645
Placing fines (3 areas)	40,247	cy	0.65	26,161
Regrade wasterock area (2:1)	6,400	cy	0.30	1,920
Regrade lime dump (3:1)	28,800	cy	0.30	8,640
Remove trash & debris	17	acre	100	1,700
Reseed & fertilize	77	acre	250	19,250
Demolish plant structures	1	sum	136,890	136,890
Haul debris to landfill	1	sum	2,000	2,000
Regrade plant site	17	acre	430	7,310
Mobilization	5	equip	1,000	5,000
		Subtotal		225,065
	Add 10% contingency			22,506
		1993-$ Subtotal		247,571
	Add 5 yr escalation at 1.42%			18,084
		Total 1998-$		265,655
	Rounded Total in 1998-$			**$265,700**
	Average cost per acre =	$3,451		

LIST OF PLANT STRUCTURES & SPECIFICATIONS

Chemstar, Incorporated DRAFT

Grantsville Quarry last revision 06/21/93

M/045/028 Tooele County

Prepared by Utah State Division of Oil, Gas & Mining

-Dimensions taken from Chemstar map of 4/19/90

-Derived scale of map is approximately 1 inch = 60 feet

-Other dimensions estimated from file photos

-Unit costs taken from Means Heavy Construction Cost Data 93

-Lump sums were estimated; all estimated figures are shaded

ITEM	#	L ft	W ft	H ft	VOL CF,GAL,CY	$/VOL	$
transformer station							500
warehouse	1	180	115	15	310,500	0.19	58,995
scales & UG tank	1						800
oil unloading house	1	7	7	10	490	0.19	93
heating oil tank	1	20	dia	25			1,000
bagger bldg.	1	25	20	15	7,500	0.19	1,425
hydrate bins	2	10	dia	30			600
hydrate bldg	1	80	20	20	32,000	0.19	6,080
lime storage bins	6	20	dia	30			1,800
office #1	1	45	105	15	70,875	0.19	13,466
docks-concrete	2	40	20	4	237	10	2,370
kiln bldg.	1	35	30	30	31,500	0.21	6,615
rotary kiln & dust colle	1						1,500
oil tank	2	15	20	?			300
laboratory	1	30	35	10	10,500	0.19	1,995
office #2	1	35	50	10	17,500	0.19	3,325
chat bin	1	10	10	?			300
main electric bldg.	1	15	15	10	2,250	0.19	428
primary crusher	1	18	25	15	6,750	0.19	1,283
secondary crusher	1	20	20	15	6,000	0.19	1,140
changeroom	1	30	35	10	10,500	0.19	1,995
truck shop	1	75	50	40	150,000	0.19	28,500
underground gas tank	1						340
oil bldg	1	10	40	10	4,000	0.19	760
conveyors	4	80	1	1	320	4	1,280
					SUBTOTAL		136,890